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2.3.4 MONOPOLISTIC COMPETITION (MC)

- Between the 2 extreme market structures of perfect competition and monopoly lie monopolistic competition and oligopoly. A monopolistically competitive market structure contains features from both monopoly and perfect competition.
- It can best be understood as a situation where there are many firms competing but where each firm does nevertheless have some degree of market power, hence the term monopolistic competition.
- Monopolistic competition can be found in retail trade (like: restaurants, boutiques, grocery stores, pharmacies) and personal services (like: hairdressing service, repair service, legal service, medical service).

2.3.4.1 Characteristic of Monopolistic Competition

a) **Large number of firms**

- There are a large number of small firms in the market. These firms compete with one another to sell their products to consumers. This feature of a large number of firms is similar to a perfectly competitive industry.

b) **Differentiated products with close substitutes**

- Each firm produces a differentiated product (products are slightly different from one another but have enough in common to be good substitutes). (examples: different types of soaps, hair shampoos, jams, noodles etc made by different firms). The demand curve for each product is more price-elastic than under monopoly but not perfectly price-elastic as in the case of Perfect Competition.
- The goods are differentiated in the following ways:
 - i) Physical differences
 - These exist in terms of quality, durability, size, taste, colour, etc.
 - ii) Product image differences
 - Created through advertising, and the use of trademarks and brand names. Particular brand names may suggest high quality by the way they are promoted, the form of packaging, or the kind of stores in which they are sold.
 - It does not matter whether the products in reality are physically identical, so long as they are perceived to be different by consumers, the products are said to be different. Examples: Adidas, New Balance, Filas & Reebok make differentiated running shoes.
 - Different packaging also serves to reinforce the brand image.
 - iii) Differences in conditions of sale
 - Location, personalized service and physical environment in which the goods are sold will also influence consumers' perception of the product. Example: some pizza joints provide home delivery service, others do not.

Implications of Product Differentiation

- Because each firm has a product that is slightly different from its competitor, each firm will have some control over the price of its products. If a firm cuts its price, it will attract some but not all consumers from other firms. Hence if price falls, quantity demanded rises. If it raises its price, some of its customers will buy from other firms. So, quantity demanded falls as price rises. The remaining customers may still buy from the firm because they consider the products of other firms to be inferior e.g. in terms of the condition of sale. The differences in the product could be real or imaginary.
- Owing to product differentiation, the industry demand and supply curves cannot be constructed, unlike in a perfectly competitive industry. There is no single price for the whole industry's range of differentiated products.

c) Engage in non-price competition

- Instead of competing for a larger share of the market by lowering prices, the monopolistic competitors may engage in non-price competition. This refers to any activity they may serve to increase the firms' sales as long as they feel that the cost of such activities is more than compensated by the resulting increase in sales.
- Non-price competition includes promotions with gifts, lucky draws, customer services and advertising and loyalty programmes. (Example: NTUC link points, DBS points, Kris Flyer points)
- Advertising may result in high degree of consumer loyalty.

d) Free entry and exit

- Since there are a large number of firms, each firm is small. This suggests that the financial requirement needed to set up the firm is low, enabling easy entry into the industry in the long run. This feature of free entry and exit in the long run is similar to that under perfect competition.

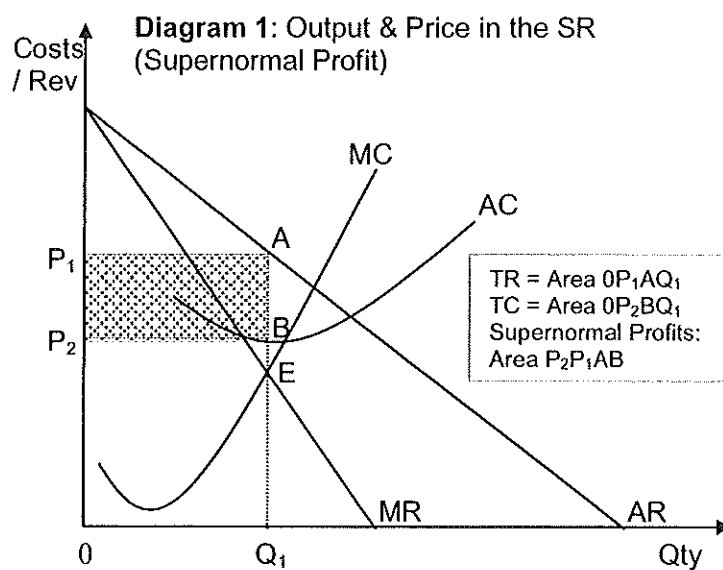
2.3.4.2 Output and Price Determination in Monopolistic Competition

- Like a monopolist, a monopolistic competitor has some control over price and faces a downward sloping demand for his product. However, the demand curve of a monopolistic competitor is relatively more price-elastic than that of a monopolist because of the large number of substitutes.
- In order to sell additional units of the good, the monopolistic competitor must lower the price of not only the additional unit sold but for all previous units as well. Therefore the DD (AR) curve is downward sloping and the MR curve lies below the AR curve.

a) **Short Run Equilibrium Under Monopolistic Competition**

- The monopolistic competitive firm could earn normal, supernormal and subnormal profits just like any other firms.
- Diagram 1 shows a case where supernormal profits are made. In this case, $AR > AC$ / $TR > TC$

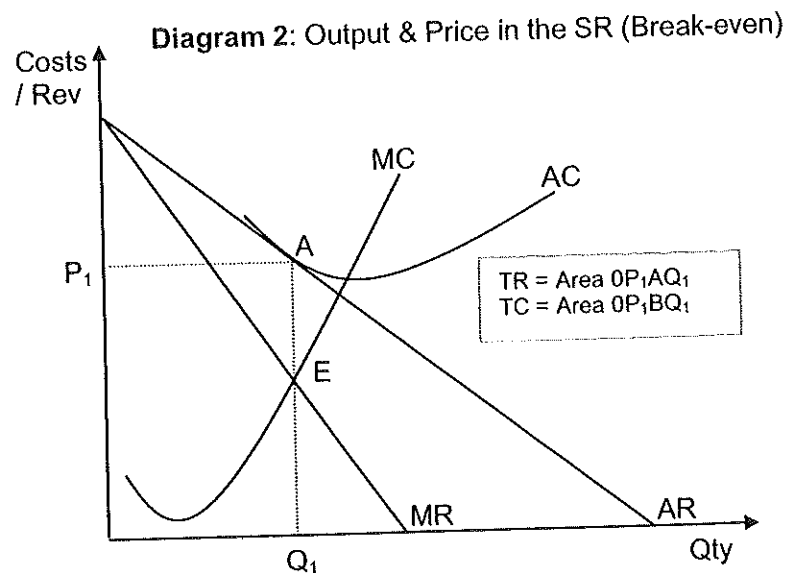
$TR = \text{Area } 0P_1AQ_1$
 $TC = \text{Area } 0P_2BQ_1$
 Supernormal Profits = Area P_2P_1AB



- Diagram 2 illustrates the case where the firm break-even. This is a situation where $AR = AC$ / $TR = TC$.

$$TR = \text{Area } OP_1AQ_1$$

$$TC = \text{Area } OP_1AQ_1$$



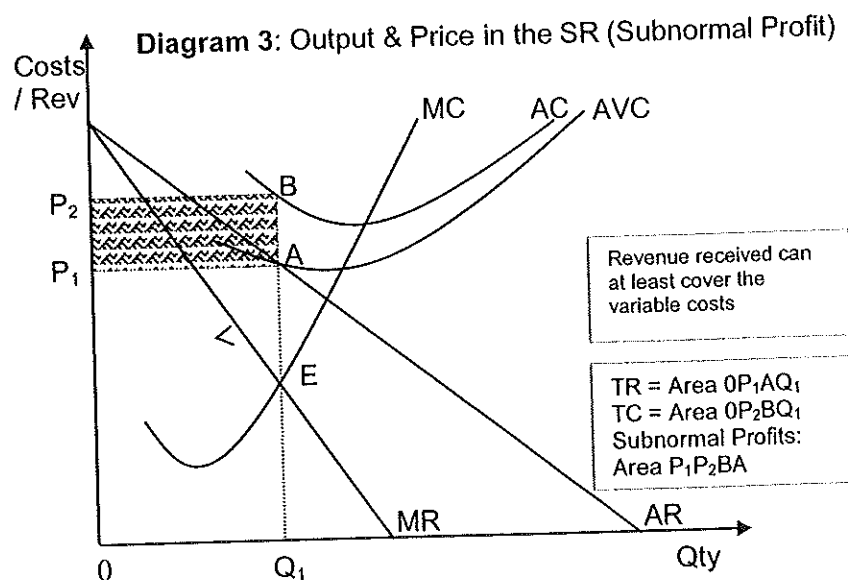
- Diagram 3 illustrates the case when subnormal profits are made. This situation is where $AR < AC$ / $TR < TC$.

$$TR = \text{Area } OP_1AQ_1$$

$$TC = \text{Area } OP_2AQ_1$$

$$\text{Subnormal Profit} = \text{Area } P_1P_2BA$$

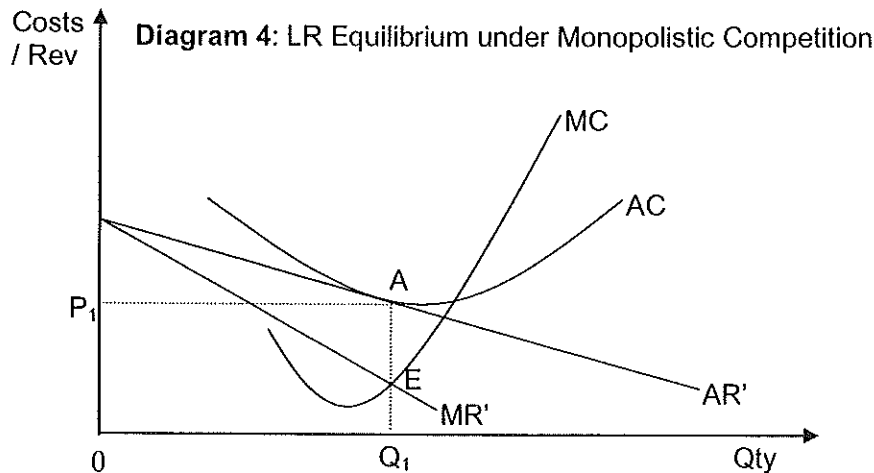
- If the firm incurs losses in the short-run, its price (AR) must at least cover AVC to continue production.



b) **Long Run Equilibrium Under Monopolistic Competition**

i) LR Equilibrium Under Monopolistic Competition

- If the existing firms earn supernormal profits in the short run, new firms, attracted by the supernormal profits, will enter the industry.
- This results in:
 - a rise in the total supply of the goods in the industry.
 - each existing firm will now have a smaller market share and hence a lower demand for its product.
 - the demand curve or AR curve of the firm will shift leftward and the slope becomes gentler due to the existence of more substitutes (i.e. more price-elastic) when new firms enter the industry.
 - supernormal profits are eliminated as AR falls to AR' where it is tangent to the AC curve. When $AR = AC$, normal profit is made.
- When the firms make only normal profit, there is no more entry of new firms into the industry.
- The industry and the firms are now at long run equilibrium.



- On the other hand if the existing firms are making subnormal profits, some firms will leave the industry
- This results in:
 - the total supply of the goods to the industry fall.
 - with total demand for the good of the industry remaining unchanged, each firm will enjoy a larger market share and a larger demand for its goods. There are also less substitutes available which makes demand more price-inelastic (i.e. demand is steeper).
 - the AR curve of the firm will shift upward till AR curve is tangent to the AC curve and normal profit is made.
 - there will be no more exit of firms out of the industry.
- The industry and the firms are now at long run equilibrium.

2.3.4.3 Advertising under Monopolistic Competition

a) **Purposes of advertising to a firm**

- To provide information to consumers on the product with the objective to increase demand or sales. The demand curve shifts rightward. This increases total revenue. It can also increase market share.
- To create some brand loyalty by addressing some aspects of consumers' needs. This makes demand for the product less price elastic. Consumers will be less sensitive to changes in price by the firm or its competitors. The demand curve shifts to the right and becomes relatively inelastic.

b) **Types of Advertising**

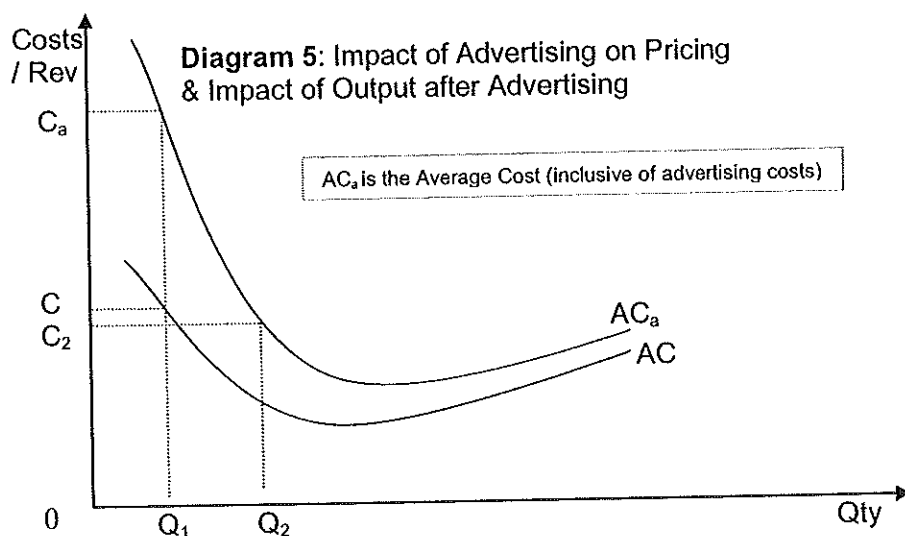
i) Informative Advertising

- Informative advertisement gives information to consumers on characteristics of the product, where to buy the good, how to use the good etc.
- Informative advertising reduces search and shopping costs for consumers. Resources used for informative advertisements are not considered as a waste.

ii) Persuasive Advertising

- Persuasive advertisement seeks to persuade consumers to buy the firm's products rather than its competitors. This arises because firms produce differentiated products.
- Persuasive advertisement wastes resources when:
 - it merely draws consumers away from competitors while the industry's output is unchanged or
 - it misleads consumers by distorting facts or making false claims.

c) **Advertising and its Effect on AC**



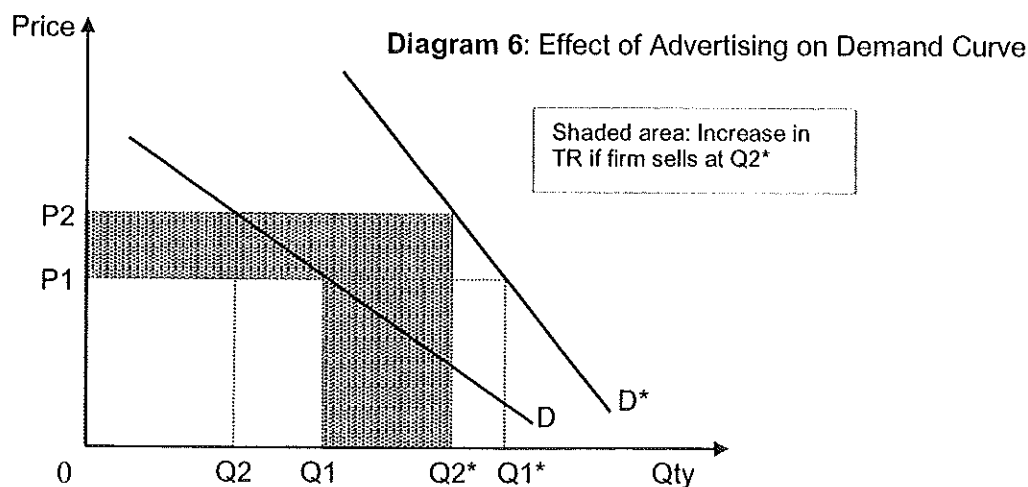
- The cost of advertising causes the AC curve to shift from AC to AC_a .
- Cost of advertising is fixed cost, and when added to the average cost of production (AC), these costs increase the average cost by a greater amount at small outputs than at large outputs.
- If advertising enables the quantity sold to increase by a larger proportion than an increase in cost, average cost is lowered.

From Diagram 5, assume that demand curve shifts to the right through advertising, and output expands from Q_1 to Q_2 . The average cost of the output is now at C_2 instead of C . If producers pass on these cost savings to consumers in the form of lower prices than consumers would benefit. The economies of scale reaped from a larger output more than offsets the increase in the costs due to advertising. Consumers could therefore get the product at a lower price with advertising than they would in its absence.

d) Evaluation

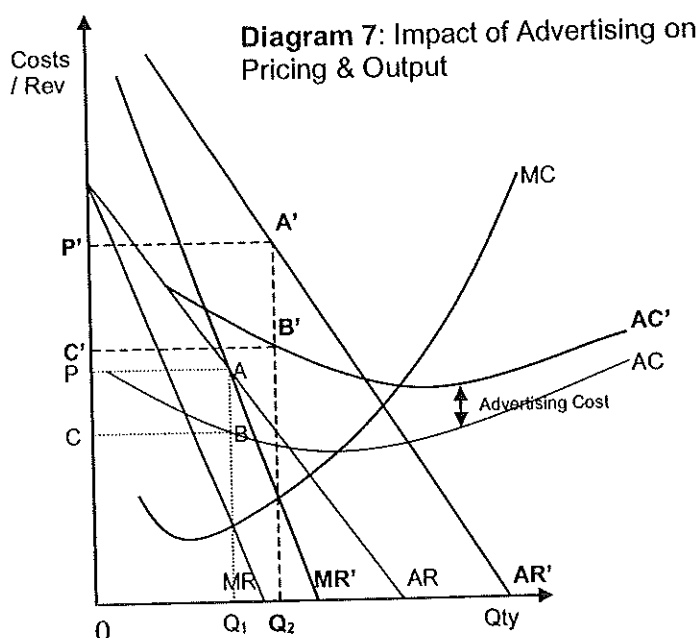
- However the advertising campaign of a producer, example: a car detergent, can be largely offset by equally expensive campaigns waged by its rival. As a result of that, total market demand for the industry's product may hardly increase at all. The industry does not end up making more profit.
- Instead the AC curve of each firm will be higher, reflecting the increased advertising costs. Refer to Diagram 5. If the output of the firm remains unchanged at Q_1 after advertisement, average cost rises from C to C_a , then consumers may end up paying a higher price (C_a) for the good. Especially if the costs is passed on the consumers in the form of higher prices.
- Some economists have argued that monopolistic competition results in too many brands, too much promotional effort, and product differentiation that is often artificial. There are others who argued that the higher cost per unit resulting from excess capacity is the price consumers willingly pay for having a greater selection.
- Whether consumers benefit from the greater diversity of products offered remains a debated question.

e) Advertising and its Effect on Demand Curves



- Refer to Diagram 6, D shows the original demand curve with price at P_1 and sales at Q_1
- D^* shows the curve after an advertising campaign. The rightward shift allows an increased quantity Q_1^* to be sold at the original price.
- If the demand is also made highly inelastic, the firm can also raise its price and still have a substantial increase in sales. Thus price can be raised to P_2 and sales will be Q_2^* – still substantially above Q_1 .
- Shifting of the demand curve to the right occur if advertising brings the product to more people's attention and if it increases people's desire for the product.
- A less elastic demand curve is the result of advertising that creates greater brand loyalty. People must be led to believe that competitors' brands are inferior. This will allow the firm to raise its price above that of its rivals with no significant fall in sales. There will only be a small substitution effect because consumers have been led to believe that there are no close substitutes.

f) **Overall Impact of Successful Advertising on Pricing and Output**



- Assuming advertising cost to be fixed. There is, therefore, an increase in AC from AC to AC' but no impact on MC.
- Diagram 7 shows the impact on demand and cost of an advertising campaign. Advertising has the impact of increasing the firm's price, outputs and profits.
- The initial equilibrium output level is at Q_1 , and Price at P . With advertising, demand for product increases and become less elastic, it shifts from AR and MR to AR' and MR' thus a new equilibrium quantity is at Q_2 , and Price at P' .

| Before Advertising | After Advertising |
|---------------------------------|---------------------------------------|
| TR = Area $OPAQ_1$ | TR = Area $OP'A'Q_2$ |
| TC = Area $OCBQ_1$ | TC = Area $OC'B'Q_2$ |
| Supernormal Profits = Area CPAB | Supernormal Profits = Area $C'P'A'B'$ |

- The firm is able to reap a much higher profits through advertising. This is given by Area $C'P'A'B' > \text{Area CPAB}$.

2.3.4.4 Evaluation of Monopolistic Competition (Advantages & Disadvantages)

a) **Advantages**

i) Product variety

- Under monopolistic competition, there are a large number of firms. Each is producing a product that is different from its competitors in terms of colour, design, materials, service and workmanship.
- In sports shoes, there are various designs, sizes, colour and materials. As consumer preferences vary, product variety will better cater to consumer needs. Consumers prefer variety in clothes, shoes, spectacles, etc.

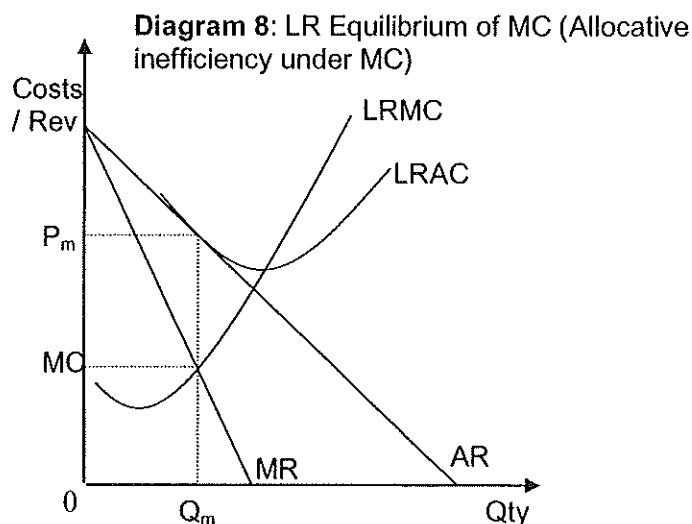
ii) Income distribution

- The firms in the industry earn normal profit in the long run. So, monopolistic competition will not lead to greater income inequality.

b) **Disadvantages**

i) Allocative Inefficiency ($P > MC$)

- The consumer values an additional unit of the good more than it costs society to produce it. Hence, not enough of the good is produced.
- However, this allocative inefficiency is relatively small compared to a monopoly because the demand curve of the monopolistic competitor is more elastic than the demand curve of the monopolist.

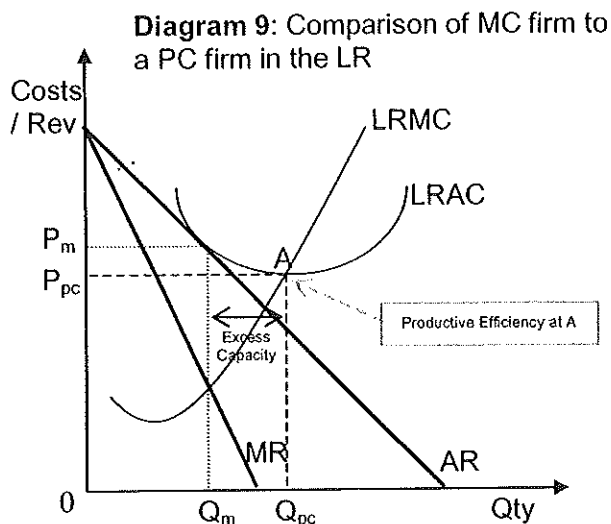


ii) Incentive & funds for R & D

- Since there are many sellers competing to sell their products, there will be incentive for R&D to come up with better products or more efficient production method than its competitors.
- However, innovation and technological advancement are limited because;
 - supernormal profit can only be earned in the short run and
 - firms lack funds for R&D as they earn normal profit in the long run due to the feature of free entry.

iii) Higher price and lower output than under perfect competition under same cost condition

- From Diagram 9, one observes that the monopolistic competitive firm charges a higher price and sells lower output compared to the perfectly competitive firm.



PC price = P_{pc} , Qty = Q_{pc}

MC equilibrium: $MC = MR$
MC price = P_m , Qty = Q_m

- Monopolistic Competition maybe advantageous in that consumer now has a wider range of choices for which he is willing and able to pay a premium in the form of higher prices.

iv) Productive Inefficiency (Excess capacity)

- Given a downward sloping demand and a U-shaped AC curve, normal profits are earned when the demand curve is tangent to the falling section of the AC curve. Thus, at long run equilibrium, the monopolistically competitive firm will always produce with excess capacity. Refer to Diagram 9.
 - The equilibrium output is Q_m while the optimum output is Q_{pc} . (Note: Optimum output, Q_{pc} , occurs at the lowest point of LRAC.)
 - There is excess capacity, $Q_m Q_{pc}$. Since the output level is not at the lowest AC, there is cost inefficiency (or productive inefficiency).
- Excess capacity indicates wastage of resources. The industry output could have been produced by fewer firms at a lower AC if the firms operate at the optimum output level.
- However, the greater the closeness of substitutes produced by firms under monopolistic competition, the more price-elastic the demand, giving rise to lesser excess capacity than under monopoly.

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